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February 16, 2017

VIA ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street S.W.
Washington D.C. 20554

Re: Oral *Ex Parte* Notice
GN Docket No. 14-177, IB Docket Nos. 15-256 and 97-95;
RM-11664 and 11773; and WT Docket No. 10-112

Dear Ms. Dortch:

On February 14, 2017, representatives of The Boeing Company ("Boeing") met with Rachael Bender, Acting Legal Advisor for Chairman Ajit Pai. Participating in the meeting on behalf of Boeing were Bruce Chesley, Audrey Allison, and the undersigned.

During the meetings, the Boeing representatives provided an overview of Boeing's applications for authority to operate non-geostationary satellite orbit ("NGSO") systems in the Ka-band and the V-band. The Boeing representatives also discussed the Commission's Spectrum Frontiers proceeding and the potential for spectrum sharing between the Upper Microwave Flexible Use Service ("UMFUS") and next-generation broadband satellite communications systems in the V-band. Both of these discussions tracked closely with the attached presentation materials and Boeing's Petition for Reconsideration in the Spectrum Frontiers proceeding.

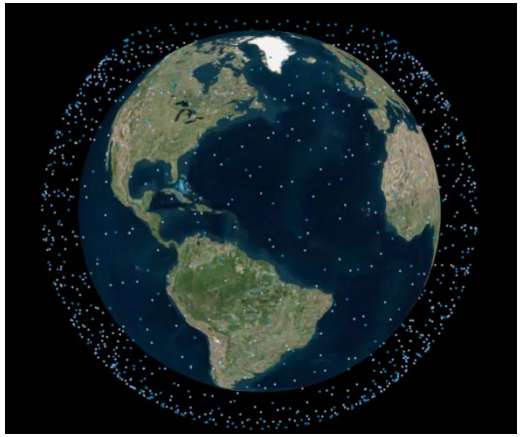
Thank you for your attention to this matter. Please contact me if you have any questions.

Sincerely,

Bruce A. Olcott
Counsel to The Boeing Company

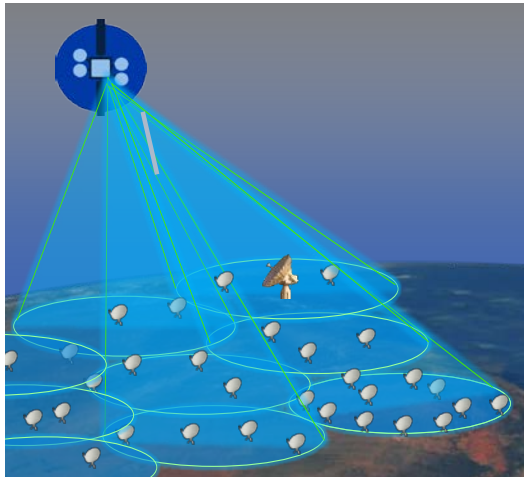
Attachments

Boeing V-Band Global Broadband System



Global Constellation
Spacecraft Qty: 1396/2956
Orbit Altitude: ~1200 km
Orbit Inclinations: 45°, 55° & 88°

Provides Global Coverage



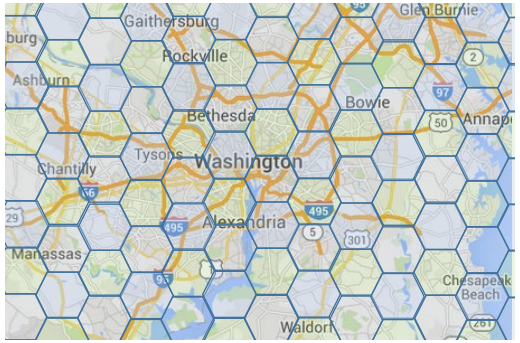
System Design

Broad Coverage LEO Satellites with Flexible Beam-forming Technology

Phased array antennas form robust links with high throughput and isolation and low side-lobe beams

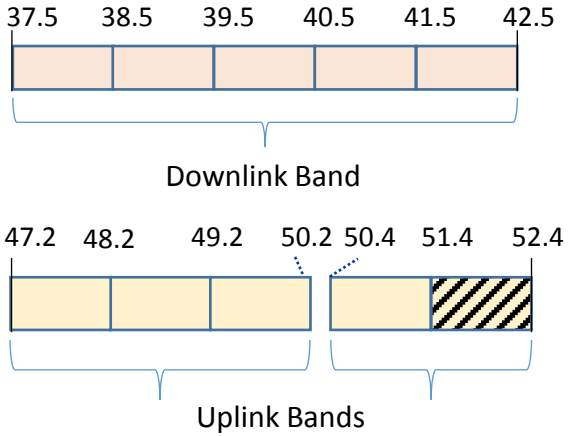
Millimeter wave technology proven and deployed in government and commercial FSS and terrestrial systems

8 km cells over Washington DC



Service Density
3-Color (Time) reuse allows for very high throughput that is competitive to serve both urban and rural areas

Peak User Rates
Exceeds FCC's Broadband Goals
>25 Mbps Down / >3 Mbps Up



Frequency Plan

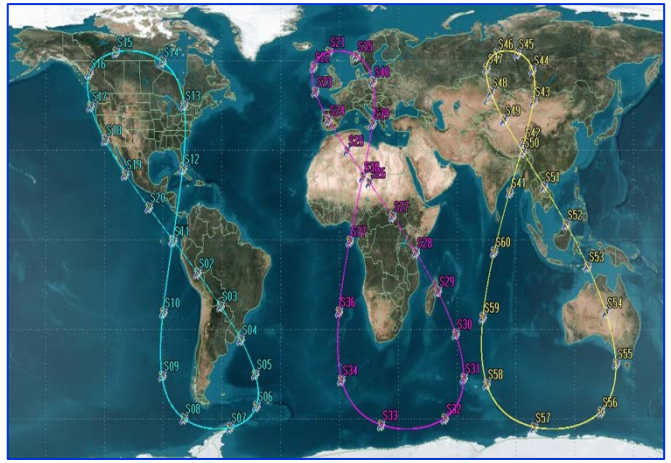
Each Beam uses all 5 GHz, dual polarization, up and down

Time domain division between adjacent cells

Gateways and user terminals share uplink and downlink bands

Broadband speeds are available to all global users

Boeing Ka-band NGSO System Overview



High Altitude Inclined Constellation

Orbit Altitude: Inclined GEO (27,355 to 44,221 km)

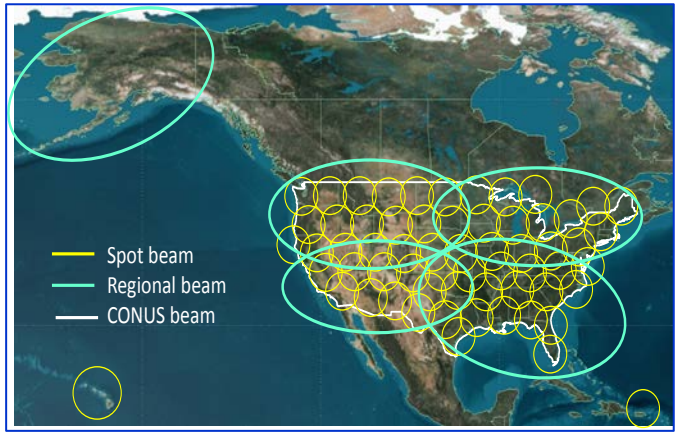
Inclination 63.4°, e=0.2

Provides global coverage via 3 nodes (Americas, Europe-Africa, Asia)

Spacecraft qty: 30 to 60 (initial deployments 10 per node)

High elevation angle (>40 deg)

6-deg separation angle maintained (α) when crossing GSO arc



Service Goals

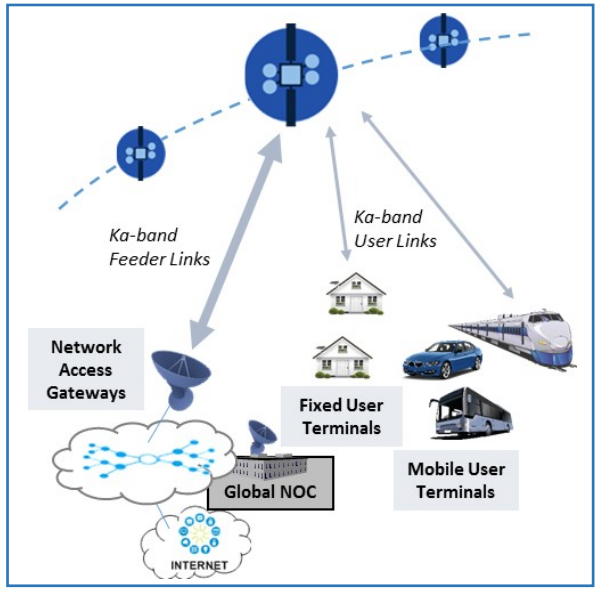
Broadband data service with flexible wide area and narrow spot beam coverage

Up to 16x frequency re-use and additional satellite diversity

Peak User Rates

Exceeds FCC's broadband goals >25 Mbps Down / >3 Mbps Up

Broadband speeds and data distribution to fixed and mobile users

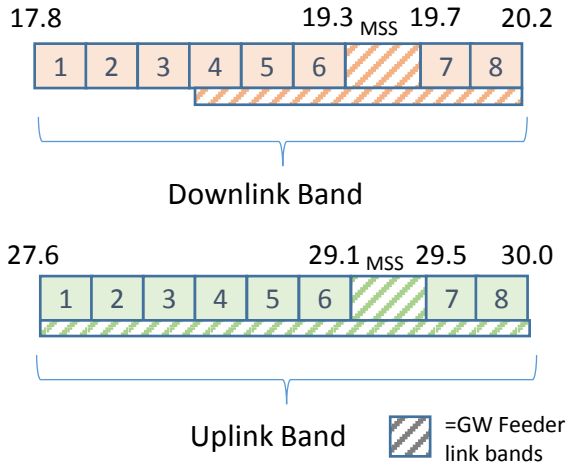


System Design

Two-way broadband service and data distribution to mobile and fixed users

Efficiency spectrum re-use via flexible beam-forming technology and satellite diversity

Global broadband coverage with modest constellation size



Frequency Plan

System uses 2.4 GHz Ka-band dual polarization, up and down

FSS and MSS band operations

8 user channels ~250 MHz each

Gateways and user terminals share FSS uplink and downlink bands

PFD and ePFD compliant

Gateway site diversity and flexible payload /user terminal operations for spectrum sharing